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| EXAMINER |
|---|
| AGUSTIN, PETER VINCENT |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>16 October 2008</u>.

2a)☐ This action is **FINAL**.          2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-9,12 and 14* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,12 and 14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

## DETAILED ACTION

1.      This application is a national stage entry (371) of PCT/EP04/13506, filed November 26,

2004.

2.      Claims 1-9, 12 & 14 are currently pending.

### *Continued Examination Under 37 CFR 1.114*

3.      A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection.  Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114.  Applicant's submission filed on October 16, 2008 has been entered.

### *Claim Objections*

4.      Claim 14 is objected to because of the following informalities:

Claim 14, line 1: "step" should be --steps--.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

5.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6.      Claims 1-7, 9, 12 & 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Kühn

et al. (US 5,485,444).

In regard to claim 1, Kühn et al. disclose a method for analyzing an abnormal region on an optical recording medium (title: "signalization of types of defects of an optical information carrier"), including the steps of: detecting the abnormal region (column 6, lines 49-50: "an evaluation of defective frames in error burst"); making a jump over the abnormal region perpendicular to the track direction (understood from the teaching that the number of "neighboring tracks" with "error bursts" are counted, see column 6, lines 55-61: "five neighboring tracks", "three neighboring tracks k."); obtaining information on the type of abnormal region during the jump (column 6, lines 49-55: "a size of error burst h relating to a subcode block time corresponding to four frames within a 96 frame was selected in order to enable, in combination with a number of tracks k to be examined regarding the appearance of errors, a distinction between errors caused by fingerprints, scratches and black dots"); determining the radial extension of the abnormal region perpendicular to the track direction (column 6, lines 55-61: "five neighboring tracks", "three neighboring tracks k."); and determining the type of the abnormal region based on the information obtained during the jump (column 6, lines 54-55: "distinction between errors caused by fingerprints, scratches and black dots"; column 6, lines 55-61: "It has become apparent that the reparable cause of error fingerprint is present as a first type of error FA1 when more than three error bursts h appear in five neighboring tracks k. On the other hand, scratches and black dots as second type of error FA2 are identified by the appearance of up to three error bursts h in three neighboring tracks k.").

In regard to claim 2, Kühn et al. disclose that the step of determining the type of the abnormal region further includes: differentiating between a first group of types (column 6, lines

49-55: "scratches and black dots") and a second group of types (column 6, lines 49-55:

"fingerprints") of abnormal region based on the obtained information (column 6, lines 49-55:

"size of error burst"; "number of tracks").

In regard to claim 3, Kühn et al. disclose that the step of obtaining information on the

type of abnormal region during the jump includes evaluating a data signal and/or a track crossing

signal (column 6, lines 49-61: "number of tracks"; "neighboring tracks") obtained from the

optical recording medium.

In regard to claim 4, Kühn et al. disclose that the step of measuring the radial extension

of the abnormal region includes measuring the time needed for jumping over the abnormal

region (column 3, lines 13-16: "a measuring (test) signal is derived from the high frequency

signal and the appearance of said measuring signal within an upper and lower threshold value is

established over a time period characterizing the cause of error"; column 3, lines 36-39: "The

time range characterizing fingerprint as cause of error is preferably a duration of 4 ms or longer

in which the measuring signal, derived from the high frequency signal, appears within the

threshold values").

In regard to claim 5, Kühn et al. disclose jumping back to the start of the abnormal region

(understood from column 7, lines 22-25: "the fingerprint cause of error is determined from the

high frequency signal RF detected from the optical disk by the playback device 1"); reading data

stored in the abnormal region ("high frequency signal RF"); and evaluating the data for

determining the type of abnormal region (column 7, lines 22-25: "the fingerprint cause of error is

determined from the high frequency signal RF") (see also column 11, lines 8-24).

In regard to claim 6, Kühn et al. disclose that the step of evaluating the data for determining the type of abnormal region includes evaluating a sync signal included in the data (column 6, lines 29-31: "first subcode synchronizing signal SCOR"; line 38: "subcode ATIME"; lines 50-55: "a size of error burst h relating to a subcode block time").

In regard to claim 7, Kühn et al. disclose that the step of measuring the radial extension of the abnormal region includes counting the number of wrong syncs in the abnormal region (column 6, lines 50-55: "a size of error burst h relating to a subcode block time corresponding to four frames within a 96 frame was selected in order to enable, in combination with a number of tracks k to be examined regarding the appearance of errors, a distinction between errors caused by fingerprints, scratches and black dots").

In regard to claim 9, Kühn et al. disclose that the types of abnormal region include at least one of a groove region, a mirror region, a defect region, a wrong bitrate region and a wrong structure region (title: "defects").

In regard to claim 12, Kühn et al. disclose that the step of differentiating between a first group of types and a second group of types of abnormal region based on the obtained information includes: classifying an abnormal region as belonging to the first group of types if an evaluation of the abnormal region does only take a short time (column 6, lines 55-61: "scratches and black dots"; "up to three error bursts h in three neighboring tracks k.") compared with the evaluation of the abnormal region in the second group of types (column 6, lines 55-61: "fingerprint"; "more than three error bursts h appear in five neighboring tracks k"); and otherwise classifying an abnormal region as belonging to the second group of types (column 6, lines 55-61: "fingerprint"; "more than three error bursts h appear in five neighboring tracks k").

In regard to claim 14, Kühn et al. disclose: differentiating between a first group of types and a second group of types of abnormal region based on the obtained information (column 6, lines 54-55: "distinction between errors caused by fingerprints, scratches and black dots"; column 6, lines 55-61: "It has become apparent that the reparable cause of error fingerprint is present as a first type of error FA1 when more than three error bursts h appear in five neighboring tracks k. On the other hand, scratches and black dots as second type of error FA2 are identified by the appearance of up to three error bursts h in three neighboring tracks k."), wherein an abnormal region is classified as belonging to the first group of types if the abnormalities of the detected signal are caused by physical characteristics of the recording medium (column 6, lines 49-55: "scratches and black dots"); and wherein an abnormal region is classified as belonging to the second group of types if the abnormalities of the detected signal are caused by erroneous data (column 6, lines 49-55: "fingerprints"; column 3, lines 36-50: "disturbed playback is caused by light fingerprints").

### Claim Rejections - 35 USC § 103

7.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.      Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kühn et al. in view of Mitarai (JP 54048213 A).

For a description of Kühn et al., see the rejection above. However, Kühn et al. do not

disclose: in regard to claim 8, a step of storing the position, the radial extension and/or the type

of the abnormal region on the optical recording medium.

Mitarai discloses: in regard to claim 8, storing the position and the radial extension of an

abnormal region of an optical recording medium (abstract: "stores the presence or not, quantity,

length, position, etc. of the defect areas").

It would have been obvious to one of ordinary skill in the art at the time of invention to

have applied these teachings of Mitarai to the method of Kühn et al., the motivation being to

improve the utilization efficiency of the optical recording medium and to simplify design (see

purpose).

### *Response to Arguments*

9.      Applicant's arguments filed October 16, 2008 have been fully considered but they are not

persuasive.

(a)      The applicant argues on page 6, paragraph 3 that Kühn fails to disclose "a jump

perpendicular to the track direction". The examiner disagrees. The applicant is first

directed to the recitations in claim 1, i.e., "making a jump over the abnormal region

perpendicular to the track direction", "obtaining information on the type of abnormal

region during the jump", and "determining the type of the abnormal region based on the

information obtained during the jump". As noted in the rejections, the claimed "obtaining

information on the type of abnormal region" corresponds to Kühn et al.'s teaching in

column 6, lines 54-55: "distinction between errors caused by fingerprints, scratches and

black dots", more specifically, in column 6, lines 55-61: "It has become apparent that the

reparable cause of error fingerprint is present as a first type of error FA1 when more than three error bursts h appear in five neighboring tracks k. On the other hand, scratches and black dots as second type of error FA2 are identified by the appearance of up to three error bursts h in three neighboring tracks k." Kühn et al.'s teaching of "three error bursts", "three neighboring tracks", and "five neighboring tracks" clearly suggests an inherent mechanism for counting these error bursts and counting the adjacent neighboring tracks. In order to count the number of "error bursts" and the extent of the "neighboring tracks", it is necessary for an optical head to "jump over the abnormal region perpendicular to the track direction".

(b)     In response to applicant's argument on page 6, last paragraph that the applicant's invention "has the advantage that a valid track is found soon without scanning the whole invalid tracks": (1) this is not recited in the claims; (2) this alleged advantage does not limit the structure of the claimed invention; and (3) since Kühn et al. disclose all claimed limitations, it follows that Kühn et al. would result with the same advantage alleged by applicant.

(c)     In response to applicant's argument on page 7, paragraph 1 that "making a jump over this kind of defect region is disadvantageous, because a track having such a defect contains also readable data and therefore, scanning along the track is necessary to obtain at least the data in the track which are still readable": (1) this does not change the fact that the argued feature is disclosed, see item (a) above; and (2) according to claim 1 itself, the type of abnormal region is obtained "during the jump".

(d)     The applicant argues in page 7, paragraph 2 that "Kühn does not determine the radial extension of the abnormal region perpendicular to a track direction". The examiner disagrees. Column 6, lines 55-61 teach that the errors are categorized as "scratches and black dots" when "up to three error bursts h in three neighboring tracks k" while the errors are categorized as "fingerprints" when "more than three error bursts h appear in five neighboring tracks k". Furthermore, the applicant is directed to column 3, lines 60-62, which indicate "detecting the radial extent of fingerprints". Therefore, the reference clearly teaches determining the "radial extension" of the abnormal region.

(e)     Page 7, last paragraph through page 9, paragraph 1 presents similar arguments as those addressed in items (a) through (d) above.

(f)     In response to applicant's argument on page 8, paragraph 3 that "using a method according to the invention of the Applicant, a jump is made perpendicular to the erroneous track until a valid track region is found and guidance on this track can be maintained", it is noted that this is not recited in the claims.

(g)     In response to applicant's argument on page 9, paragraph 3 that "Kühn does not teach or suggest differentiation of errors in a group caused by physical defects and a group caused by erroneous data". The examiner disagrees. As noted in the rejection above, column 6, lines 54-55 recite "distinction between errors caused by fingerprints, scratches and black dots". The "scratches and black dots" correspond to the claimed "first group of types…caused by physical characteristics". The "fingerprints" correspond to the claimed "second group of types...caused by erroneous data" (note column 3, lines 36-50: "disturbed playback is caused by light fingerprints").

(h)     In response to applicant's argument on page 10, paragraph 2 that the Mitarai

reference fails to teach "making a jump over the abnormal region perpendicular to the

track direction", it should be noted that the Kühn et al. reference is relied upon for these

limitations, see item (a) above.

### *Contact Information*

10.     Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Peter Vincent Agustin whose telephone number is (571) 272-

7567.  The examiner can normally be reached on Monday-Thursday 8:30 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, A. L. Wellington can be reached on (571) 272-4483.  The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system.  Status information for published applications

may be obtained from either Private PAIR or Public PAIR.  Status information for unpublished

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have questions on access to the Private PAIR system, contact the Electronic Business Center

(EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service

Representative or access to the automated information system, call 800-786-9199 (IN USA OR

CANADA) or 571-272-1000.

/Peter Vincent Agustin/
Primary Examiner, Art Unit 2627